

What is claimed is:

1. An optical instrument, comprising:
 - a shaft having a distal end;
 - an interchangeable head detachably connected to said distal end of said shaft at a coupling point;
 - a first transmission system for transmission of illuminating power in distal direction, said first transmission system being arranged partially in said shaft and partially in said interchangeable head and passing through said coupling point;
 - a second transmission system for transmission of image information in proximal direction, said second transmission system being arranged partially in said shaft and partially in said interchangeable head and passing through said coupling point;
 - at least one of said interchangeable head and said coupling point being designed in such a way that upon loosening of said interchangeable head image information of perceptively modified quality is transmitted by said second transmission system.
2. The instrument of claim 1, wherein said second transmission system has an imaging optics, said imaging optics being arranged partially in said interchangeable head and partially in said shaft, a part of said imaging optics arranged in said shaft being exchangeable.
3. The instrument of claim 1, wherein said second transmission system has at least one image pick-up that is arranged in said interchangeable head, and has at least one electric signal line from said image pick-up in proximal direction, and wherein said coupling point is designed such that upon loosening of said interchangeable head said electric signal line is interrupted.
4. The instrument of claim 3, wherein said electric signal line is designed in the region of said coupling point as a plug-in contact.

5. The instrument of claim 1, wherein said second transmission system has at least one image pick-up that is arranged in said interchangeable head, wherein said at least one image pick-up is a miniaturized camera.
6. The instrument of claim 1, wherein said first transmission system comprises an optical waveguide that extends through said shaft and through said interchangeable head, and is interrupted at said coupling point, and wherein said distal end of said shaft and said interchangeable head each have a flat polished surface at said coupling point.
7. The instrument of claim 1, wherein said second transmission system has an imaging optics, said imaging optics being arranged entirely in said interchangeable head.
8. The instrument of claim 1, wherein said first transmission system has at least one light source and an electric power line to said light source, said light source being arranged in said interchangeable head, and wherein said coupling point is designed such that upon loosening of said interchangeable head said power line is interrupted in distal direction.
9. The instrument of claim 1, wherein said interchangeable head is connected to said distal end of said shaft at said coupling point by means of at least one positioning pin that engages in a corresponding bore.
10. The instrument of claim 9, wherein said at least one positioning pin is provided on said interchangeable head, and said bore is provided on said distal end of said shaft.
11. The instrument of claim 1, wherein said interchangeable head is connected to said distal end of said shaft at said coupling point by means of at

least one positioning pin that engages in a corresponding bore, and wherein said at least one positioning pin is exchangeable.

12. The instrument of claim 1, wherein said interchangeable head is connected to said distal end of said shaft at said coupling point by means of at least one positioning pin that engages in a corresponding bore, and wherein said at least one positioning pin serves the purpose of transmitting electric signals or electric power.

13. The instrument of claim 1, wherein there is arranged between said interchangeable head and said distal end of said shaft an elastic element that upon loosening of said interchangeable head distances said interchangeable head from said distal end of said shaft.

14. The instrument of claim 1, wherein said interchangeable head is connected to said distal end of said shaft at said coupling point by means of at least one positioning pin that engages in a corresponding bore, and wherein said distancing is limited to less than a length of said at least one positioning pin.

15. The instrument of claim 1, wherein at least one operating element is arranged in said interchangeable head.

16. The instrument of claim 15, wherein said at least one operating element can be connected to said distal end of said shaft by means of a plug.

17. An optical instrument, comprising:

- a shaft having a distal end;
- an interchangeable head detachably connected to said distal end of said shaft at a coupling point;

- a first transmission system for transmission of illuminating power in distal direction, said first transmission system being arranged partially in said shaft and partially in said interchangeable head and passing through said coupling point;

- a second transmission system for transmission of image information in proximal direction, said second transmission system being arranged partially in said shaft and partially in said interchangeable head and passing through said coupling point, wherein said second transmission system has an imaging optics, said imaging optics being arranged partially in said interchangeable head and partially in said shaft;

- at least one of said interchangeable head and said coupling point being designed in such a way that upon loosening of said interchangeable head image information of perceptively modified quality is transmitted by said second transmission system.

18. An optical instrument, comprising:

- a shaft having a distal end;
- an interchangeable head detachably connected to said distal end of said shaft at a coupling point;

- a first transmission system for transmission of illuminating power in distal direction, said first transmission system being arranged partially in said shaft and partially in said interchangeable head and passing through said coupling point;

- a second transmission system for transmission of image information in proximal direction, said second transmission system being arranged partially in said shaft and partially in said interchangeable head and passing through said coupling point;

- wherein said second transmission system has at least one image pick-up that is arranged in said interchangeable head, and an electric signal line that leads from said image pick-up through said coupling point in proximal direction.

19. The instrument of claim 18, wherein said electric signal line is designed in the region of said coupling point as a plug-in contact.
20. The instrument of claim 18, wherein said at least one image pick-up is a miniaturized camera.
21. The instrument of claim 18, wherein said first transmission system comprises an optical waveguide that extends through said shaft and through said interchangeable head, and is interrupted at said coupling point, and wherein said distal end of said shaft and said interchangeable head each have a flat polished surface at said coupling point.
22. The instrument of claim 18, wherein said first transmission system has at least one light source and an electric power line to said light source, said light source being arranged in said interchangeable head, and wherein said coupling point is designed such that upon loosening of said interchangeable head said power line is interrupted.
23. The instrument of claim 18, wherein said interchangeable head is connected to said distal end of said shaft at said coupling point by means of at least one positioning pin that engages in a corresponding bore.
24. The instrument of claim 23, wherein said at least one positioning pin is provided on said interchangeable head, and said bore is provided on said distal end of said shaft.
25. The instrument of claim 18, wherein said interchangeable head is connected to said distal end of said shaft at said coupling point by means of at least one positioning pin that engages in a corresponding bore, and wherein

said at least one positioning pin serves the purpose of transmitting electric signals or electric power.

26. The instrument of claim 18, wherein there is arranged between said interchangeable head and said distal end of said shaft an elastic element that upon loosening of said interchangeable head distances said interchangeable head from said distal end of said shaft.

27. The instrument of claim 18, wherein said interchangeable head is connected to said distal end of said shaft at said coupling point by means of at least one positioning pin that engages in a corresponding bore, and wherein there is arranged between said interchangeable head and said distal end of said shaft an elastic element that upon loosening of said interchangeable head distances said interchangeable head from said distal end of said shaft, wherein said distancing is limited to less than a length of said at least one positioning pin.